

Recovery Plan Action Status

Plan Name: Harperella

Plan Status: Final

Plan Date: 05-Mar-91

Lead Agency: USFWS

Lead Office: West Virginia Ecological Services Field Office

(304)

636-6586)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Harperella (Ptilimnium nodosum)	1	1	Delineate essential habitat for existing populations	Partially Complete	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Planning	Internal Technical Assistance, Species Expert	Completed WV, MD, GA, Needed for AL, SC, NC, and AR
Harperella (Ptilimnium nodosum)	1	10	Conduct long-term demographic studies	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Research: Demographic Studies	Internal Technical Assistance	Ongoing for Fluvial type. Needed for Nodosum type

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Harperella (Ptilimnium nodosum)	2	11	Secure permanent protection of occupied habitats	Ongoing Current	FY 2008		The Nature Conservancy, USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Acquisition	Internal Administrative, Internal Field Assistance, Internal Technical Assistance	Costs undetermined Portions of populations in AR and AI are on protected lands (Nat Forest, NAT Park, one pop in SC is on state lands)
Harperella (Ptilimnium nodosum)	2	12	Develop management plans for populations on public lands	Not Started			USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Planning	Internal Technical Assistance, Species Expert	

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Harperella (Ptilimnium nodosum)	2	13	Seek watershed-wide conservation measures	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Habitat Maintenance and Manipulation	Internal Technical Assistance	
Harperella (Ptilimnium nodosum)	2	14	Annually assess recovery efforts	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Planning	Internal Technical Assistance	

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Harperella (Ptilimnium nodosum)	3	15	Evaluate effectiveness of protection programs	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Planning	Internal Technical Assistance	
Harperella (Ptilimnium nodosum)	3	16	Continue to define habitat requirements	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Habitat Maintenance and Manipulation	Internal Technical Assistance	Ongoing for Fluvial type. Needed for Nodosum type

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Harperella (Ptilimnium nodosum)	3	17	Delineate potential habitat	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Research: Habitat Status	Graduate Student, Internal Field Assistance, Internal Technical Assistance	
Harperella (Ptilimnium nodosum)	3	18	Correlate habitat disturbance with population trends	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Habitat Maintenance and Manipulation	Internal Technical Assistance, Species Expert	Greatest urgency is at pond sites

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Harperella (Ptilimnium nodosum)	3	19	Determine length of seed storage in ponds	Unknown			USFWS Regional Office 4 - Atlanta, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Research: Propagation	Graduate Student	
Harperella (Ptilimnium nodosum)	1	2	Identify and monitor threats to known populations	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: General	Internal Field Assistance, Internal Technical Assistance	

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Harperella (Ptilimnium nodosum)	3	20	Refine and implement appropriate management techniques	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Habitat Maintenance and Manipulation	Internal Technical Assistance	Greatest urgency is at pond sites
Harperella (Ptilimnium nodosum)	3	21	Develop transplant techniques	Ongoing Current	FY 2007		Center for Plant Conservation, USFWS Regional Office 4 - Atlanta, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Propagation	Graduate Student, Internal Field Assistance, Internal Technical Assistance	Efforts are underway in NC to propagate and transplant from imperilled populations. WV is collecting seeds this year for a similar effort. Germplasm resource at NC Botanical Gardens

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Harperella (Ptilimnium nodosum)	3	22	Conduct further genetic studies	Ongoing Current	FY 2007		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Research: Genetics	Graduate Student	Un of Ill - Mary Ann Feist gathered genetic material for study
Harperella (Ptilimnium nodosum)	3	23	Develop a cultivated source of plants	Ongoing Current	Prior to FY 1995		Center for Plant Conservation, USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Propagation	Contract, Graduate Student	

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Harperella (Ptilimnium nodosum)	3	24	Re-establish populations within historical range	Ongoing Current	FY 2007		Center for Plant Conservation, USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Reintroduction	Internal Field Assistance, Internal Technical Assistance	NC and NPS in MD have initiated these efforts
Harperella (Ptilimnium nodosum)	3	25	Develop information materials	Ongoing Current	FY 2000 - FY 2004		Center for Plant Conservation, USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Other: Information and Education	Internal Technical Assistance	

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Harperella (Ptilimnium nodosum)	1	3	Determine habitat protection priorities	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Habitat Maintenance and Manipulation	Internal Technical Assistance, Species Expert	
Harperella (Ptilimnium nodosum)	1	4	Seek cooperation of landowners	Ongoing Current	FY 2000 - FY 2004		The Nature Conservancy, USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Land Use	Internal Field Assistance, Internal Technical Assistance	Being implemented MD, WV

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Harperella (Ptilimnium nodosum)	1	5	Identify populations in need of watershed-wide protection	Complete	Prior to FY 1995	FY 2000 - FY 2004	USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Management: Planning	Internal Technical Assistance, Species Expert	
Harperella (Ptilimnium nodosum)	1	6	Delineate watershed boundaries for specified populations	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Research: Habitat Requirements	Internal Field Assistance, Internal Technical Assistance	

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Harperella (Ptilimnium nodosum)	1	7	Enforce laws protecting species and habitat	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Other: Law Enforcement	Internal Technical Assistance	
Harperella (Ptilimnium nodosum)	1	8	Search for additional populations	Ongoing Current	FY 2008		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Research: Population Assessment	Internal Field Assistance	VA and AR have recently initiated efforts to look for new populations

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Harperella (Ptilimnium nodosum)	1	9	Monitor size and distribution of populations	Ongoing Current	Prior to FY 1995		USFWS Regional Office 4 - Atlanta, USFWS Regional Office 5, State Conservation Agencies of participating states, including: Alabama Natural Heritage Program, Arkansas Natural Heritage Program, Georgia Natural Heritage Inventory, Maryland Natural Heritage Program, North Carolina Plant Conservation Program, South Carolina Heritage Program, West Virginia Natural Heritage Program	Research: Population Surveys	Internal Field Assistance	